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The Parent–Child Acculturation Gap, Parental Monitoring, and Substance Use in Mexican Heritage Adolescents in Mexican Neighborhoods of the Southwest U.S

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Abstract

A sample of 206 Mexican-heritage 7th-grade adolescents attending predominantly Mexican-heritage schools in Arizona was assessed on their linguistic acculturation, perceived parental monitoring, and substance use. One of their parents also reported on their own parental level of acculturation. While greater parental acculturation predicted greater marijuana use, the acculturation gap (child's level of acculturation over and above that of the parent) was not predictive of substance use. There was a significant acculturation gap by parental monitoring interaction for marijuana use, where the negative correlation between parental monitoring and marijuana use was attenuated for parent–youth dyads that exhibited the largest acculturation gap. This suggests that a greater parent–youth cultural distance (the acculturation gap) attenuates that protective effect of parental monitoring on youth marijuana use. Results are discussed in terms of how the acculturation gap increases the risk for problem behaviors in Mexican American adolescents through its effect on family processes.

Introduction

Latino youth report higher rates of alcohol and other drug use when compared with youth of other ethnic backgrounds. Latinos from the eighth-grade have reported more alcohol and illicit drug use (with the exception of amphetamines) when compared with their White non-Hispanic counterparts (Johnston, O'Malley, Bachman, & Schulenberg, 2011). It is important,

however, to consider the moderating effects of acculturation in understanding Latino adolescent alcohol and drug use. That is, rates of use may differ by levels of acculturation, and this has important implications for approaches to drug prevention as linked to differences by levels of acculturation. For example, Hussey et al.'s (2007) analyzed data from the National Longitudinal Study of Adolescent Health (Add Health) probability study and showed that first generation Latino immigrant adolescents reported lower alcohol use rates (6.3%) compared with second generation (11.6%) or third generation (7.5%) Latino youth. Furthermore, the “acculturation gap” between parents and youth (Birman, 2006; Szapocznik & Kurtines, 1993) is an understudied aspect of Latino parent–child relationships, where this gap has been hypothesized to be a factor in the acculturation–substance use relationship. Thus, this article empirically tests the hypothesis that differential rates of acculturation between parents and their children have an effect on substance use among Mexican-heritage youth (Mexican and Mexican American youth). These relationships are thus examined within the context of the effects of acculturation on parenting practices.

Acculturation and Problem Behaviors

Acculturation has been defined as a process by which immigrants and their children adopt the values, beliefs, customs, and lifestyles from the culture of the receiving country (Unger et al., 2000; Berry, 2006). New immigrants acculturate to varying rates, ranging from being completely absorbed into the host culture to acculturating little because they maintain strong connections with their culture of origin (Berry, 2006). In studies that operationalize acculturation as a unidirectional process, whereby individuals progress only towards complete acculturation, acculturation has been associated with higher rates of substance use among Mexican/Latino American adolescents (Epstein, Doyle, & Botvin, 2003; Gil, Wagner, & Vega, 2000; Myers et al., 2009; Unger et al., 2006).

Several mechanisms have been proposed to explain the relationship between acculturation and substance use among Mexican American youth (Strait, 1999). The first is acculturation stress. The process of acculturation can be stressful with individuals experiencing conflicting sets of norms and values as well as prejudice and discrimination, which may lead to behavior problems and other negative mental health outcomes that include substance use and abuse (Berry, 2006; Fosados et al., 2007; Sullivan et al., 2007).

The second proposed mechanism is the adoption of the values and practices of the United States, which may inhibit the protective elements of an individual's culture of origin (Fosados et al., 2007; Sullivan et al., 2007). More specifically, the traditional Latino value of *familismo*, which promotes loyalty to family and the protection of their reputation, has been found to be protective against substance use among Latino youth (Balls Organista, Organista, & Kurasaki, 2003). This family orientation is accompanied by greater parental monitoring and involvement with their children (Denner, Kirby, & Coyle, 2001), which can also protect against substance use (Marsiglia, Parsai, & Kulis, 2009). Several studies, in fact, have suggested that acculturation to American values and practices in Mexican American adolescents are related to the development of problematic family function (Gil et al., 2000), behavioral problems (Ramirez et al., 2004), and substance use (Epstein, Botvin, & Diaz,

2001). Differential rates of acculturation between parents and youth, with youth typically adopting mainstream American values faster than their parents, may create parent–child communication barriers and family conflicts that increase stress and weaken the influence of parental cultural values (Schwartz, Montgomery, & Briones, 2006).

Parenting Practices and Substance Use

Studies have shown that parenting practices are significant predictors of adolescent substance use (Cota-Robles & Gamble, 2006; Pokhrel, Unger, Wagner, Ritt-Olson, & Sussman, 2008; Tobler & Komro, 2010) and that parenting remains a primary determinant of adolescent outcomes (Steinberg, 2001). Parenting practices refer to the methods and styles of parenting, including goal-directed behaviors in which parents perform their parental duties with their children (Darling & Steinberg, 1993). Particular aspects of parenting practices (e.g., parenting styles, parent communication about family rules and discipline, and parental closeness, support, and discipline) have been shown to influence youth substance use (Alvarez et al., 2003; Barber, Stolz, & Olsen, 2005; Cleveland et al., 2005; Newman et al., 2008). For example, both effective discipline and warmth are important parenting processes that make unique contributions to youth's adaptive psychological and social adjustment (Barber et al., 2005), along with parental monitoring and the quality of parent–child communication (Cota-Robles & Gamble, 2006; Pokhrel et al., 2008; Tobler & Komro, 2010). By contrast, negative parenting has been shown to adversely influence youth behaviors. For instance, lack of discipline, lack of parental monitoring (Gorman-Smith, Tolan, & Henry, 2000), and permissive parenting (Darling & Steinberg, 1993) have been linked to maladjustment and negative behavioral outcomes during adolescence.

Parenting behaviors might affect substance use by increasing or decreasing child–parent attachment and bonding. Social control theory suggests that bonding to family minimizes delinquency because the family is an institution for conventional socialization (Hirschi, 1969). Accordingly, youth who feel more emotionally connected to parents should be more likely to actively avoid disappointing them (Cernkovich & Giordano, 1987). The emotional attachment between the parent and child may also increase voluntary time spent together, thereby decreasing opportunities for delinquency.

Among Hispanic adolescents, prior research has shown that parental monitoring (Parsai, Marsiglia, & Kulis, 2008) and parent–child communication (Tobler & Komro, 2010) serve as protective factors against substance use behaviors. For example, Tobler and Komro (2010) found that Hispanic youth with low levels of parental monitoring and communication were at significantly greater risks for past year and past month alcohol and marijuana use and for ever having smoked a cigarette. Meanwhile, Smith and Krohn (1995) found that parent–child involvement—defined as parent–child communication and time spent with parents—had a significant, negative association with delinquency for Hispanic youth, although not for White and African American youths.

The Acculturation Gap and Family Functioning

Several researchers (e.g., Schwartz, Montgomery et al., 2006) discuss the conflicts that emerge in Hispanic families when parents maintain traditional values while adolescents adopt the more progressive norms and values of their American peers. In many Hispanic families, parents, especially those who immigrate to ethnic enclaves as adults, may not easily adopt American cultural practices (Schwartz et al., 2006). Whether or not the maintenance of traditional norms and values among parents is considered to be problematic is largely dependent on the youth's cultural orientation (Martinez, 2006). Gil et al. (2000) argue that it is the acculturation gap between parents and their children, rather than the absolute level of acculturation, that predisposes Hispanic families to high conflict, communication difficulties, and decreased emphasis on the importance of family.

However, support for the acculturation gap hypothesis among Hispanic/Latino adolescents has been mixed. Lau et al.'s (2005) study found that the direct effect of discrepancies in the reported level of acculturation between parents and youth was not predictive of youth conduct problems. Schofield, Kim, Parke, and Coltrane (2008), on the other hand, found that the father–youth acculturation gap was predictive of greater father–youth conflict and youth internalizing behaviors, but only in the context of an already poor father–youth relationship, i.e., the quality of the father–youth relationship moderated the effect of the acculturation gap on conflict and internalizing. Interestingly this effect was found only for fathers, and not for mothers. That is, the mother–youth acculturation gap was not found to be predictive of mother–youth conflict or internalizing behaviors. Marsiglia, Kulis, Fitzharris, and Becerra (2009) found that a combination of a more acculturated mother and a less acculturated youth was associated with greater youth externalizing behaviors. Similar to the Schofield et al. (2008) study, tests of mediation indicated that this association between the acculturation gap and externalizing was mediated by family and acculturation conflict.

Some studies have examined the effect of acculturation gaps on not only family conflict but also specific parenting practices, such as parental monitoring and the transmission of values and behavioral expectations. Mogro-Wilson's (2008) analyses of data from Latino adolescents from the Add Health data set found that adolescents' reports of greater family use of English was associated with lower levels of perceived parental control, which in turn was predictive of greater adolescent alcohol use. While this finding may simply reflect a main effect of acculturation, it is also possible that cultural differences between parents and their more acculturated children as well as greater family conflicts may each interfere with parental control efforts, leading to more problematic youth behaviors. Smokowski, Rose, and Bacallao's (2008) study of Latino families provides support for both processes. Acculturation conflict was found to be negatively correlated with positive family dynamics and positively correlated with parent–adolescent conflict. In turn, the parent–adolescent acculturation gap was negatively correlated with family cohesion, adaptability, and familism, but was unrelated to parent–adolescent conflict. In sum, the parent child acculturation gap may only result in increased use of substance when parenting practices are affected by the changing dynamics in the family.

Hypotheses

The hypotheses that guided this study were that the parental level of acculturation would be associated with higher substance use rates in Mexican American adolescents and a greater parent–child acculturation gap (the effect of the adolescents' acculturation over and above that of their parent) would operate as an additional factor that predicts greater youth substance use. Meanwhile, adolescents' reports of the degree to which their parents monitor their behavior were expected to be significantly and negatively correlated with youth substance use. Of particular interest here, it was hypothesized that the acculturation gap would increase the risk for youth problem behaviors through undermining parental monitoring and control of their children. This would be manifested in a significant acculturation gap by parental monitoring interactions, such that parental monitoring effects in reducing substance use would be attenuated for parent–youth dyads who exhibited the largest acculturation gaps.

Methods

Sample

The data analyzed in the present study were drawn from a longitudinal study of the effectiveness of a Parent Education supplement (PIs: Drs. Flavio Marsiglia and Felipe González Castro at Arizona State University) to the established *keepin' it REAL* (Marsiglia & Hecht, 2005) primary prevention intervention for adolescent substance use. Data for the present analyses were drawn from the preintervention, Wave 1, assessment of 223 seventh-grade participants (111 boys, 109 girls, and three missing gender), along with one of their parents, almost always the mother. These families were recruited from nine local Phoenix area schools from two school districts that contained high proportions of Mexican and Mexican American residents. These analyses as reported are based on the 206 adolescents (107 boys and 99 girls) who identified their ethnicity to be “Mexican,” “Mexican American,” or “other Latino.” The mean age of the child sample was 12.23 years (standard deviation [*SD*] = .49) at the time of initial testing during the fall semester of seventh grade. The mean age of the parents was 37.54 years.

Measures

Parental questionnaire—Parental acculturation was measured by the six-item revised version of the General Acculturation Index (Balcazar, Castro, & Krull, 1995; Castro & Gutierrez, 1997): (a) three items on Spanish versus English language preference for speaking, reading, and TV and radio were rated on a 5-point response scale ranging from 1 (*only Spanish [or another non-English language]*) to 5 (*only English*); two items on friends and neighbors preferences were rated on a 5-point response scale ranging from 1 (*almost all Hispanics/Latinos*) to 5 (*almost all White Americans*); and one item on ethnic pride were rated on a 5-point response scale ranging from 1 (*very proud*) to 5 (*ashamed*). Only the speaking, friends, and TV and radio items were used to compute a parent linguistic acculturation scale that is equivalent to the child linguistic acculturation scale. The Cronbach's α for this scale for the present sample was .80, and scale scores are the mean across the three items, with higher scores reflecting more acculturation.

Child questionnaire—Child control variables included the child's age, school grades, and whether the student was receiving the Federal school lunch program.

Substance use—Substance use was measured by four questions about any lifetime use of alcohol, cigarettes, marijuana, or inhalants, where zero indicates no use and 1 indicates at least one occasion of use.

Acculturation—Acculturation was measured by the Linguistic Acculturation scale (Marin, Sabogal, Marin, Otero-Sabogal, & Perez-Stable, 1987), a composite of three items ($\alpha = .67$ for the present sample) asking whether English is preferred over non-English in language use with family, friends, and media (TV, radio, and music). Responses were rated on a 5-point scale ranging from 1 (*English only*) to 5 (*Spanish only*), with scale scores calculated as the mean value across the items when reverse-coded, so that higher scores represent more acculturation.

Parental monitoring—Parental monitoring was measured on a 5-item scale ($\alpha = .79$ for the present sample), adapted from Kerr and Stattin (2000) and Stattin and Kerr (2000), that asks whether parents know what the child is doing in their free time and after school, who their friends are, where they are going when they leave the house, and what time they'll be back. Items were rated on a 4-point scale ranging from 1 (*always*) to 4 (*never*), with scale scores being the mean across the items reverse-coded, so that higher scores represent more parental monitoring.

Analyses

An acculturation gap score for each parent–child dyad was derived from computing the standardized residual (in effect, as noted below, a difference score) from regressing the child's linguistic acculturation scores on the parent's linguistic acculturation scores. Schofield et al. (2008) noted the importance of controlling for the main effect of acculturation when analyzing the acculturation gap effect. Hierarchical multiple regression analyses were performed to predict the lifetime “ever” use of alcohol, cigarette, marijuana, or inhalant, with both genders combined. The first block of the model comprised entering the child control variables, and the second block added the parental linguistic acculturation to test for the main effect of acculturation. The third block involved the entry of child linguistic acculturation to test for the effect of the acculturation gap as an acculturation effect over and above the main effects of parent linguistic acculturation, which is equivalent to a parent versus child difference score. The fourth block comprised entering the child's perception of parental monitoring, and the final block involved entering the interaction term, which comprised the acculturation gap by parental monitoring interaction. This interaction term was computed by centering the parental monitoring variable and multiplying it by the standardized residual of the acculturation gap score.

Results

For the ever used substances variables, 39.4% of the sample reported having used alcohol, 12.1% had used cigarettes, 9.2% had used marijuana, and 6.3% had used inhalants.

Table 1 presents the means and standard deviations for the parental linguistic acculturation and child control variables, linguistic acculturation and acculturation gap, perceived parental monitoring, and ever use of alcohol, cigarettes, marijuana, or inhalants separately by child gender. There were no significant gender differences on these variables.

Table 2 presents the intercorrelations among the parental linguistic acculturation, child linguistic acculturation and acculturation gap, and child perceived parental monitoring variables. Although, as might be expected, parental linguistic acculturation was highly correlated with child linguistic acculturation, child perceived parental monitoring was not correlated with any of the acculturation variables.

Table 3 present the correlations of the parental linguistic acculturation, child linguistic acculturation and acculturation gap, and child perceived parental monitoring variables with the child substance use measures. Higher parent linguistic acculturation was correlated with greater marijuana use, but none of the other acculturation variables was significantly correlated with substance use. In contrast, parental monitoring was significantly negatively correlated with child cigarette, marijuana, and inhalant use.

Table 4 presents the hierarchical multiple regression results for child ever use of alcohol, cigarettes, marijuana, and inhalants for the five-block model: (a) child control variables, (b) parent linguistic acculturation, (c) child linguistic acculturation over and above the main effect of parent linguistic acculturation as an indicator of the acculturation gap, (d) child's perception of parental monitoring, and (e) the interaction of the acculturation gap by parental monitoring. Greater parent linguistic acculturation predicted greater marijuana use, but the acculturation gap represented by Block 3 did not significantly predict substance use. There was, however, a significant acculturation gap by parental monitoring interaction as a predictor of marijuana use (the standardized regression coefficients for the low, medium, and high levels of the acculturation gap were $-.352$, $-.312$, and $.106$, respectively; Figure 1). This interaction effect indicated that the effect of parental monitoring in reducing marijuana use were attenuated and even somewhat reversed in parent-child dyads that exhibited the largest acculturation gaps.

Discussion

Consistent with previous studies of Mexican/Latino American adolescents (Lau et al., 2005; Marsiglia et al., 2009), the acculturation gap in the present study was not found to be predictive of substance use. However, as predicted and consistent with the findings of Schofield et al. (2008), the acculturation gap did predict problem behavior, in this case substance use, but only within the context of its moderating effect on family processes. Schofield et al. (2008) argue that the acculturation gap is a risk factor for problem behaviors via its effect in increasing the likelihood of family conflict. They then conceptualize positive parent-child relationships as a buffer that protects against the negative effects of the acculturation gap and family conflict. The present findings conceptualize and demonstrate instead that the acculturation gap increases the likelihood of problem behaviors through the gap's effect in undermining parents' control of their children. Future research should explicitly test if acculturation gap effects on family processes operate by increased family

conflicts, increasing stress that results from such conflicts, less youth identification with parental values, and/or parents' lowered ability to monitor youths' behaviors.

Given the high correlation between child linguistic acculturation and the index of the acculturation gap used in the present study ($r = .88$, Table 2), it could be argued that the present findings represent the effects of child linguistic acculturation per se and not necessarily the gap between parental and child linguistic acculturation. The high correlation between child linguistic acculturation and the acculturation gap index reflects the fact that the latter variable is simply the residual of child acculturation after partialling out the effect of parental linguistic acculturation. Evidence for the discriminant validity of the acculturation gap index is as follows: (a) the significant amount of variability extracted from child linguistic acculturation by parental linguistic acculturation ($r = .47$, Table 2); (b) the somewhat higher correlations of drug use with acculturation gap, compared to child linguistic acculturation, in spite of partialling out parental linguistic acculturation (Table 3); and (c) the notably lower correlation of acculturation gap with number of years the parent reported being in the United States, compared to the comparable correlations for parental and child linguistic acculturation ($r = .18, .29, .27$, respectively). It is notable that a similar pattern of correlations with acculturation gap, parental linguistic acculturation, and child linguistic acculturation also occurs for whether the child was receiving the Federal school lunch program ($r = .17, .34, .32$, respectively), suggesting that parent years in the United States and receiving the school lunch program are primarily associated with parental acculturation.

An alternative conceptualization of the relationships among the variables of acculturation gap, parenting practices, and problem behaviors is that the effect of acculturation and of the acculturation gap on problem behaviors may be mediated by parenting practices, given that acculturation may act as a factor that attenuates parental monitoring, which in turn leads to problem behaviors. Previous research by Pokhrel et al. (2008), however, found no support for parental monitoring as a mediator of the effect of acculturation on alcohol use in their sample of Hispanic adolescents. Similarly, Ramirez et al.'s (2009) study of Anglo and Hispanic American adolescents found that both parental monitoring and acculturation had significant independent effects in predicting substance use. Meanwhile, Warner, Fishbein, and Krebs' (2010) study of Mexican American adolescents found no effects for several indices of acculturation with alcohol use. They also found that a brief self-report measure of parental involvement and communication did not significantly predict alcohol use. The present findings are consistent with these previous studies, where in the multiple regression analyses, parental monitoring continued to operate as a significant predictor of Mexican American adolescent substance abuse over and above the effects of both the parents' and the youths' levels of acculturation, i.e., the effects of parental control were not attenuated by either the main effect of parents' acculturation or the effect of the parent-offspring acculturation gap.

As Marsiglia et al. (2009) point out, much of the existing literature cites the acculturation gap between parents and children as an important factor in youth problem behaviors, such that teachers, social workers, psychologists, and other professionals who work with Mexican American adolescents may incorrectly attribute all youth problem behaviors to this

acculturation gap. Issues affecting immigrant families, however, should be examined in greater depth because youth problem behaviors may be caused by other family conflicts, and not necessarily acculturation conflicts caused by this acculturation gap. Marsiglia et al. (2009) argue for the need to better understand the meaning of the acculturation experience as lived by different families and in different social contexts.

Smokowski et al. (2008), nevertheless, argue for the importance of working with Latino families to decrease any parent–adolescent acculturation conflicts, which they found to be the strongest risk factor for family dysfunction, while working to increase the positive influences of culture of origin involvement and biculturalism. Bacallao and Smokowski (2005) have developed a family-oriented bicultural skills training programs for use with Latino families that target both the stress-inducing family conflict and the undermining of traditional values of *familismo* that is associated with greater parent–offspring acculturation gaps. The present findings support the value of such interventions.

Limitations and Future Research

These findings should be interpreted in light of several study limitations. This randomized intervention study sample was drawn only from predominantly Mexican-heritage neighborhoods in the central and southern areas of a large southwestern city, so that these participants may not be representative of all Mexican Americans. Additionally, the data used in this study were cross sectional, limiting the ability to draw causal conclusions. Last, relying on child reports of parental behavior may distort the actual parenting practices in the home. Although it can be argued that the child's perceptions of parenting behavior may be more indicative of their behavioral outcome, an adolescent's perception is just that and may not accurately reflect parenting behavior.

The present research was based on a unidimensional conceptualization of acculturation, while Berry's (2006) bidimensional approach propose four acculturation strategies: (a) adherence to the dominant culture only (assimilation), (b) maintenance of the culture of origin only (separation), (c) adherence to the dominant culture and maintenance of the culture of origin (integration), and (d) exclusion of both cultures (marginalization). When a bidirectional approach is used, both complete assimilation and complete separation have been associated with higher rates of substance use, and the integration of both the dominate culture and the culture of origin has been identified as being protective (Berry, 2006; Fosados et al., 2007; Sullivan et al., 2007). Future research should assess the effect of acculturation gaps on the likelihood that Latino adolescents will enact the more adaptive integration acculturation strategy.

Future research should also include a larger sample size and a longitudinal design that allows for making temporal inferences and the ability to see if the moderating effects of the acculturation gap on parenting practices change over time. A qualitative, narrative dimension to future research would also be useful to elucidate particular family processes affected by the acculturation gap (Marsiglia et al., 2009). It would also be important to include both mothers and fathers. Future research might assess the effects of time in the United States, which has been shown to decrease amounts of parental monitoring as the adolescent adopts more mainstream American values and norms. Additional measures of

acculturation, such as generation status, ethnic identification, and bidimensional acculturation strategies, should also be considered.

Conclusion

Despite these limitations, this study adds to our understanding of the relationship between acculturation and Latino adolescent's substance use behavior. The differential effect of parenting behavior based on levels of the acculturation gap between youth and their parents indicates the need for interventions that attend to these family dynamics to achieve the same preventative effect that one would expect with families that are not experiencing acculturations gaps. These findings suggest that traditional prevention strategies, such as increasing parental monitoring, might not be effective in families where parents and youth are acculturating at different rates. Perhaps there is a need to redefine parental monitoring in these situations. Parents and youth going through the acculturation process together are the best experts to engage in developing and adapting family interventions to prevent the use of alcohol, tobacco, and other drugs among fast acculturating Latino youth. More research is needed to explore what it is about this acculturation gap that appears to attenuate the effect of parenting practices on substance use outcomes. Understanding the lived experience of immigrant families, as they advance through the process of acculturation, may be critical for creating and tailoring prevention interventions that target Latino youth.

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Figure 1.
Acculturation gap $\times$ parental monitoring interaction.

Table 1

Means and Standard Deviations by Child Gender

Scale	Males		Females		t
	Mean	SD	Mean	SD	
Parental variable					
Linguistic acculturation	2.06	0.86	2.01	0.89	0.33
Child variables					
Age	12.26	0.50	12.20	0.47	0.91
Grades in school	3.19	1.50	3.07	1.65	0.53
School lunch	1.18	0.49	1.21	0.54	-0.40
Linguistic acculturation	3.33	0.69	3.25	0.57	0.85
Acculturation gap	0.09	1.12	-0.10	0.85	1.30
Parental monitoring	3.13	0.71	3.26	0.64	-1.33
Ever use alcohol	0.39	0.49	0.40	0.49	-0.11
Ever use cigarettes	0.13	0.34	0.12	0.33	0.32
Ever use marijuana	0.12	0.33	0.06	0.25	1.41
Ever use inhalants	0.04	0.19	0.10	0.30	-1.67

Note. SD = standard deviation.

*
p < .05.
**
p < .01.

p < .001.

Table 2
Intercorrelations of Acculturation and Parenting Variables

	Child linguistics Acculturation	Acculturation gap	Parental monitoring
Parent linguistic acculturation	.47***	.00	.03
Child linguistic acculturation	–	.88***	.10
Acculturation gap	–	–	.07

*
 $p < .05$.

**
 $p < .01$.

 $p < .001$.

Table 3
Correlations of Acculturation and Parenting Variables With Child Substance Use

	Alcohol	Cigarettes	Marijuana	Inhalants
Parent linguistic acculturation	.01	.04	.24***	-.10
Child linguistic acculturation	-.03	-.09	-.01	-.10
Acculturation gap	-.03	-.12	-.13	-.07
Child parental monitoring	-.14	-.29***	-.21**	-.18*

*
 $p < .05$.

**
 $p < .01$.

 $p < .001$.

Table 4
Hierarchical Multiple Regressions of Alcohol, Cigarette, Marijuana, and Inhalant Use

	Alcohol		Cigarettes		Marijuana		Inhalants	
	beta ^a	R ^{2b}	beta	R ²	beta	R ²	Beta	R ²
Child age	-.03	—	-.01	—	.24***	—	-.13 ⁺	—
Child grades in school	-.07	—	-.09	—	.10	—	-.07	—
Child school lunch	-.05	.01	-.06	.01	-.09	.13***	.04	.02
Parent linguistic acculturation	.04	.00	.17 ⁺	.01	.28***	.03*	-.08	.01
Child linguistic acculturation	.01	.00	-.11	.02	-.17 ⁺	.01	-.08	.01
Parental monitoring	-.19*	.03*	-.32***	.09***	-.11	.02*	-.20*	.04*
Acculturation gap by parental monitoring	-.09	.01	-.06	.00	.20*	.03*	-.02	.00

^a Standardized betas for the full model including all predictors.

^b R^2 change for predictors entered at each step: (a) child age, grades in school, school lunch, (b) parent linguistic acculturation, (c) child linguistic acculturation, (d) child report of parental monitoring, and (e) interaction of acculturation gap $\times$ parental monitoring.

⁺ $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.